REMARKS

Claims 1-18 are pending. Claims 15-18 are new. The applicant respectfully requests reconsideration and allowance of this application in view of the above amendments and the following remarks.

The title has been amended to make it more descriptive. Therefore, the objection made in paragraph 2 of the office action should be withdrawn.

Claim 9 has been amended to correct a typographical error.

Claims 1 and 2 were rejected under 35 USC 102(b) as being anticipated by Godeau *et al.* The applicant respectfully requests that this rejection be withdrawn for the following reasons.

According to the examiner the cause for the rejection of claim 1 is that the Godeau *et al.* reference discloses all features of claim 1. The patent to Goudeau *et al.* lacks the first positive feature recited in the claim, namely the feature of a "shrinking device." Therefore, this rejection should be withdrawn.

More specifically, the patent to Goudeau *et al.* describes a fiber-drawing furnace for drawing down an optical-fiber preform into an optical fiber. The fiber-drawing furnace includes a double-walled graphite tube (1) which defines an internal fiber-drawing chamber (4) receiving a preform (5) via an open end of the graphite tube (1). The graphite tube (1) is heated by induction by means of a coil (6) mounted around its periphery (see col. 2, lines 34 to 40). The fiber-drawing furnace as described in Goudeau *et al.* can in no way be seen as a shrinking device.

The term "shrinking device" in claim 1, as terms like "drill machine" or "distance measuring device" in another technical fields, clearly defines a positive structure of the invention,

which serves to clearly delimit the scope of protection by defining the background of the invention. For this reason the invention as recited in claim 1 is clearly novel over Goudeau *et al.*

Claim 2 depends on claim 1. Claim 2 is thus considered to be patentable at least for the reasons given above with respect to claim 1.

Claims 1-14 were rejected under 35 USC 103(a) as being unpatentable over Rabe (US 2001/0024020 Al) in view of Misu *et al.* (JP 1-109029) or Hosoi *et al.* (US 5,356,245). The applicant respectfully requests that this rejection be withdrawn for the following reasons.

Rabe describes a shrinkage device comprising a housing (2) with a turntable (3), which is located on the upper side of the housing and into which four shrinkage tension chucks can be inserted. Aside from a driving mechanism for the turntable and a control device, a cooling device for the shrinkage tension chuck is disposed in the housing (2) (see page 2, paragraph 2). Rabe does not disclose a gas suction device for drawing gases from the tool holder; instead, Rabe discloses a gas blowing device for blowing gases out from the tool holder.

The aim of the present invention as defined in claim 1 is to develop a shrinking device by which, in comparison to existing shrinking devices, the comfort and the security of a user can be improved. With a gas suction device, gases produced during the heating process of the tool holder can be evacuated for instance to a filter without affecting the user.

A person skilled in the art faced with the problem caused by these gases would at the time the invention was made not consider the reference to Rabe as a relevant reference. This reference, which discloses blowing harmful gases out of the tool holder, would have led one of ordinary skill in the art to a device in which the problem would be amplified rather than reduced. Therefore the invention as defined in claim 1 would not have been obvious in view of the Rabe

reference, taken separately or in combination with Misu *et al.* or Hosoi *et al.* Therefore, the rejection of claims 1-14 should be withdrawn.

Claims 2-14 depend on claim 1, directly or indirectly. Thus, claims 2-14 are considered to be patentable at least for the reasons given with respect to claim 1 above.

Claim 15 is new. Claim 15 contains the features of claim 1 and additional features, which are disclosed in the specification on page 11, lines 3 to 6. Claim 15 recites the features of a tool chuck holder and a measuring device. Therefore, claim 15 is clearly distinguished from Goudeau *et al.* (US 5,848,093), Rabe (US 2001/0024020 Al), Misu *et al.* (JP 01109029) or Hosoi *et al.* (US 5,356,245) or any of these references in combination.

The patent to Goudeau *et al.*, which describes no shrinking device, further lacks the features of a tool chuck holder and a measuring device. Therefore, claim 15 is clearly novel over the patent to Goudeau *et al.*

Rabe describes a shrinkage device comprising a housing (2) with a turntable (3), which is disposed on the upper side of the housing and into which four shrinkage tension chucks can be inserted. Aside from a driving mechanism for the turntable and a control device, a cooling device for the shrinkage tension chuck is located in the housing (2) (see page 2, paragraph 2). The shrinkage device as described in Rabe does not show a measuring device for measuring a tool placed in a tool holder. Furthermore Rabe does not disclose a gas suction device for sucking gases from the tool holder. Instead, Rabe discloses a gas blowing device for blowing gases out from the tool holder. Therefore the invention as defined in claim 15 is considered to be novel over Rabe.

The aim of the present invention is to provide an improved shrinking device in comparison to known shrinking devices. In particular, the precision during a tool measurement process is improved.

By means of the proposed gas suction device a higher precision by the measuring of the tool can be achieved because the gases produced while the tool holder is being heated are evacuated. The measuring process is based on an optical measurement of the tool. Without the suction device, gases and warm air are emitted in the vicinity of the tool holder. Due to this the measurement device "sees" the tool that has to be measured through a space containing warm air and warm gases. Warm air and gases have a refraction index that is different from the refraction index of cold and clean air. Thus the discharge of warm air and gases from the tool holder has an influence on the precision of the measuring process of the tool.

Furthermore, certain types of emitted gases can, after a certain time of use of the shrinking device, damage the high precision measuring device. Thus, the removal of these gasses prevents long term damage.

A further advantage of the removal of gases from the tool holder is that the gas suction device protects the operator from any potentially harmful effect of the gases.

Since Rabe does not disclose or suggest measuring the tool before it is shrunk in the tool holder, a person skilled in the art would not have taken Rabe into consideration.

Furthermore, a person skilled in the art that desires a higher measuring precision and improved user safety would also not have taken Rabe into consideration, since Rabe discloses blowing gases out of the tool holder, where users might be located. That is, instead of being reduced, the disadvantages caused by the gases and the warm air flow would be a greater problem.

A person skilled in the art could not find in Rabe any hints that would have led him to a device as defined in claim 15, by means of which more accurate measuring and better safety can be achieved. Therefore claim 15 should be patentable over Rabe.

The Misu *et al.* reference (Hitachi) shows a shrinkage fitting method and a device for a rotor of a compressor. The shrinking device of c *et al.* includes a heater and a vacuum generator to vacuum suck the heated rotor (3) (see abstract). The Misu *et al.* reference does not disclose a tool chuck holder and a measuring device to measure a tool in view of a shrinking process. Therefore the invention as defined in claim 15 is also patentably distinguished from Misu *et al.*

In Misu *et al.* vacuum is generated in order to transport the heated rotor (3) from a heating place to a mounting place. However, the vacuum does not serve to evacuate harmful gases escaping from the heated rotor. Therefore a person skilled in the art would not have taken Misu *et al.* into consideration.

If the teaching of Misu *et al.* were combined with the teaching of Rabe, a person skilled in the art would be led to a shrinking device by which a tool chuck is heated at a first place before being transported to a second place, at which it is introduced into a tool chuck holder. During the heating of the tool chuck at the first place the vacuum generator, serving only for the transport of the tool chuck, is not operated, so that escaping gases from the tool chuck cannot be collected. If a person skilled in the art had taken Misu *et al.* into consideration, he would not have been led to a device that, besides of lacking the feature of a measurement device, does not solve the above mentioned problems. Therefore claim 15 should be patentable over the combination of Rabe and Misu *et al.*

Furthermore, Hosoi *et al.* (US 5,356,245) shows a power tool with a sucking pipe (31) for sucking cutting chips and harmful gases (see figure 1). It is clear that the invention of claim 15 is novel over Hosoi *et al.*

If a person skilled in the art would have taken the teachings of Rabe and Hosoi *et al.* into consideration, he would not have been led to the shrinking device as defined in claim 15. First such a combination would lack the feature of a measuring device for measuring a tool placed in the tool holder. Second, the suction device as described in Hosoi *et al.* serves to suck gases being produced by the tool during the handling of a work piece and not for collecting gases escaping from the tool holder. Furthermore, in view of the fact that gases have to be collected directly at the contact place with the work piece, the tool holder and the tool have to be completely enclosed in a hood (24), as can be seen in the figure of the abstract. If the teaching of Hosoi *et al.* were transposed to a shrinking device, the hood as taught in Hosoi *et al.* would render a measurement of the tool very difficult.

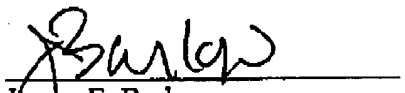
The advantages of the device of claim 15, namely, improved measuring accuracy and greater user safety, cannot be achieved by any devices disclosed in the cited references, taken separately or in combination. Therefore the present invention should be patentable over the cited art.

Claims 16-18 are new. Claims 16-18 depend on claim 1, directly or indirectly, and are thus considered to be patentable at least for the reasons given above with respect to claim 1.

In view of the foregoing, the applicant submits that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,



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